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New synonymy and reports of biting midges in Poland  
(Diptera: Ceratopogonidae)

PATRYCJA DOMINIAK, RYSZARD SZADZIEWSKI

Department of Invertebrate Zoology, University of Gdańsk,  
Marszałka Piłsudskiego 46, 81-378 Gdynia, Poland,  
e-mail: heliocoris@gmail.com

**ABSTRACT.** *Palpomyia semifumosa* GOETGHEBUER, 1922 is recognised as a new junior synonym of *P. tinctipennis* KIEFFER, 1919. **New synonymy.** Seven rare species of biting midges of the genera *Bezzia*, *Ceratopogon*, *Culicoides* and *Dasyhelea* are reported from Poland for the first time. *Dasyhelea kyrenica* REMM, 1972 is a new species in the European fauna. As a result the total number of biting midges in Poland increases to 213.

**KEY WORDS:** Diptera, Ceratopogonidae, *Palpomyia*, redescription, synonymy, new records, Poland.

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There are listed 207 species of biting midges in the Polish fauna (SZADZIEWSKI 2007). *Sphaeromias miricornis* KIEFFER should be excluded from this list because it was recently recognised as a junior synonym of *S. pictus* (MEIGEN) (SZADZIEWSKI et al. 2007). At present we add further seven new species listed below. As a result, the actual number of biting midges species reported from Poland increases to 213.

The aim of our study is to expand the list of Polish Ceratopogonidae and to explain the relations of the names *Palpomyia semifumosa* GOETGHEBUER, 1922 and *P. tinctipennis* KIEFFER, 1919. Materials from Poland were collected by Patrycja DOMINIAK and Anna KLASA of Ojców. The type female of *P. semifumosa* was borrowed from the Institut Royal des Sciences Naturelles de Belgique, Bruxelles.

***Palpomyia tinctipennis* KIEFFER, 1919**

*Palpomyia tinctipennis* KIEFFER, 1919: 110 (female, Hungary, Czech Republic); GOETGHEBUER 1934: 73 (female, in key, distribution – Hungary, Serbia); ZILAHY-SEBESS 1940: 97 (Slovakia, Hungary); REMM 1973: 352 (male, female, Hungary); REMM 1976: 194 (male, female, in key, distribution, syn. = *adusta*, = *nigritella*); HAVELK 1982: 113 (female, in key, Spain, distribution, syn. = *adusta*, = *nigritella*); REMM 1988: 24 (in catalogue, Croatia, Czech Republic, Germany, Hungary, Italy, France, Lithuania, Spain, Ukraine, syn. = *obscuripennis*, = *adusta*, = *nigritella*); SZADZIEWSKI & BORKENT 2003: 257 (Poland, distribution, comments).

*Palpomyia obscuripennis* KIEFFER, 1919: 110 (female, Croatia).

*Palpomyia hortulana*: GOETGHEBUER 1920: 82 (female, Belgium).

*Palpomyia semifumosa* GOETGHEBUER, 1922: 58 (female, nom. nov. for *P. hortulana* GTGH. nec MEIG.); KIEFFER 1925a: 106 (in key, Belgium, syn. = *hortulana* GTGH. nec MEIG.); EDWARDS 1926: 417 (male, female, in key, England, syn. = *brachialis* EDW. nec HAL., = *hortulana* GTGH. nec MEIG.); GOETGHEBUER 1934: 72 (male, female, in key, distribution – Belgium, England, syn. = *hortulana* GTGH. nec MEIG., = *brachialis* EDW. nec HAL.); DE MEIJERE 1946: 9 (the Netherlands); REMM 1967: 32 (Georgia, Russia - Alania); REMM 1976: 190 (as a synonym of *P. flavipes*, with questionmark); REMM 1988: 19 (as a synonym of *P. flavipes*); KRZYWIŃSKI 1996: 116 (male, female, Sweden, distribution, comments); PETERSEN & ACHIM 2001: 138 (Denmark). **Syn. n.**

*Palpomyia adusta* KIEFFER, 1925b: 426 (male, Germany).

*Palpomyia nigritella* CLASTRIER, 1962: 255 (female, France).

**Diagnosis**

Body with small simple, unmodified setae. Wing darkened on distal half. Spermathecae small. Femora yellow - fore femur dark brown in apical part, middle and hind femur in 1/3 of distal portion brown or dark brown. Fore femur with 6 ventral spines located on short tubercles. Tibiae more or less brown.

**Material examined**

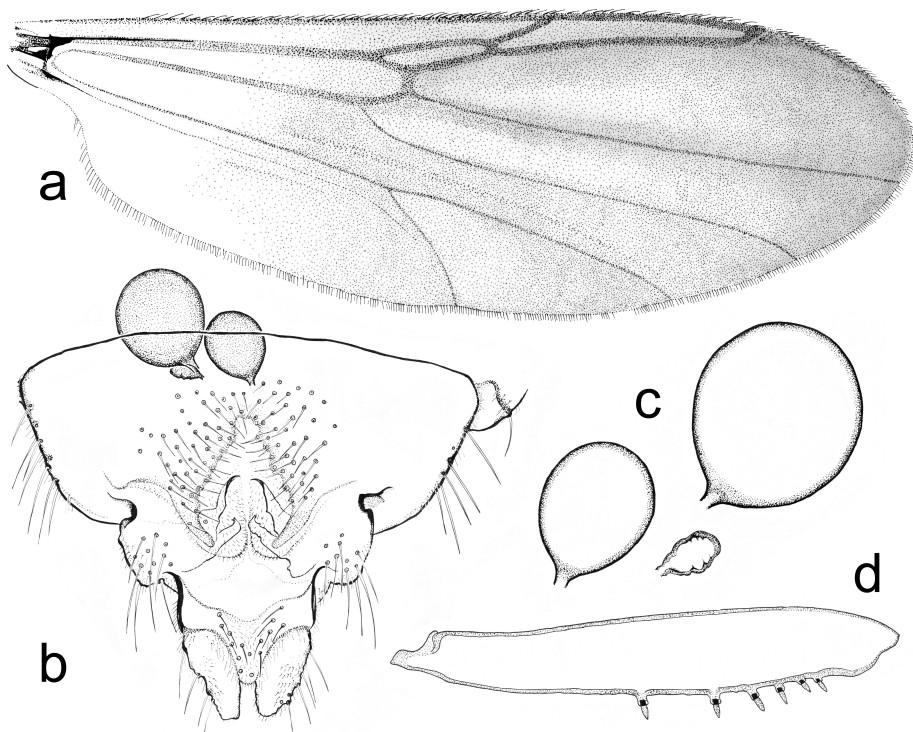
Belgium. Institut Royal des Sciences Naturelles de Belgique, Bruxelles. *Palpomyia semifumosa*, Hockai, [holotype], 8 June 1913, R.I.Sc.N.B. 18.073, Coll. et det., M. GOETGHEBUER. Lectotype female, present designation.

Comment. Goetghebuer (1920) described the species from type series which included 5 females. All specimens from the type series are treated by us as syntypes. The specimen from Bruxelles labelled as the “holotype” we designate here as the lectotype.

**Description**

**Female** (lectotype of *P. semifumosa*). Head dark brown. Pedicel brown, flagellum brown, only proximal flagellomeres with more pale bases. Flagellum length 1.68 mm, AR=1.71. Third palpal segment slender, length 100 µm, width 30 µm, PR=3.3. Thorax dark brown, scutellum black with two submedian and two lateral long setae. Thorax, abdomen,

coxae and femora with small simple unmodified setae. Wing (Fig. 1a) darkened on distal half, 3.26 mm long, 1.11 mm wide, CR=0.82. Halter brown, knob pale brown. Femora yellow; fore femur dark brown on apical part, middle and hind femur on 1/3 of distal portion brown or dark brown. Fore femur with 6 ventral spines located on short tubercles (Fig. 1d). Mid and hind femora without spines. Knees dark. Tibiae brown, fore tibia sometimes paler. TR(I) 1.99, TR(II) 3.09, TR(III) 2.33. Claws similar on all legs, equal, small, without inner basal teeth. Genitalia (Fig. 1b). Functional seminal capsules spherical, unequal, with short neck (Fig. 1c), dimensions 80x60  $\mu\text{m}$ , 110x90  $\mu\text{m}$ . Three pairs of dorsal apodemes (eversible sacs) well visible. Shape of sternite IX as in Fig. 1b.



**Fig. 1.** Lectotype female of *Palpomyia semifumosa* GTHG.: a – wing, b – genitalia, c – seminal capsules, d – fore femur.

### Distribution

France, the Netherlands, Denmark, Germany, Italy, Sweden, Poland, Czech Republic, Slovakia, Hungary, Croatia, Serbia, Lithuania, Ukraine, Russia (Alania in the Caucasus), Georgia (see above for references).

### Discussion

In the catalogue of the Palaearctic Diptera REMM (1988) mentioned by mistake this species from Austria (Felsölövői). Actually this locality is in Croatia.

#### *Bezzia rhynchostylata* REMM, 1974

**NE Poland.** Kaszubski Landscape Park, Reserve Kurze Grzedy n. Mirachowo, oddz. 102, 18 May 2006, net, 1 male, leg. P. DOMINIAK.

**Distribution.** Norway (HAGAN et al. 2000), Siberia in Russia (Sakha Republic) (REMM 1974). New to the Polish fauna.

#### *Ceratopogon lacteipennis* ZETTERSTEDT, 1838

**SW Poland.** Karkonoski National Park, Hala Szrenicka, peat-bog, (50°47'N 15°29'E), 1224 m asl, 20 July 2006, net, 1 male, 2 females, leg. P. DOMINIAK; peat-bog n. Pielgrzymy, (50°46'N 15°41'E), 1197 m asl, 23 July 2006, net, 2 females, leg. P. DOMINIAK; n. Rozdroża pod Śnieżką, peat-bog, (50°47'N 15°34'E), 1138 m asl, 21 July 2006, net, 1 male, leg. P. DOMINIAK.

**Distribution.** Great Britain, Belgium, Norway, Germany, Sweden, Czech Republic, Estland, Lithuania, Russia (SZADZIEWSKI & BORKENT 2004). From Poland reported for the first time.

#### *Culicoides clintoni* BOORMAN, 1984

**NW Poland.** Kaszubski Landscape Park, Reserve Staniszewskie Błota n. Mirachowo, oddz. 230, 231, peat-bog, 8 June 2005, ex cult., 1-17 July 2005, 1 female, leg. P. DOMINIAK. **SW Poland.** Karkonoski National Park, Hala Szrenicka, peat-bog, (50°47'N 15°29'E), 1224 m asl, 20 July 2006, net, 1 male, leg. P. DOMINIAK. **NE Poland.** Wigierski National Park, n. Słupie, lake Suchar Wielki, 4 July 2005, net, 1 male, leg. P. DOMINIAK. **SE Poland.** Kotlina Orawsko-Nowotarska, peat-bog Baligówka, 26 June 2006, net, 14 males, 9 females, leg. P. DOMINIAK; 28 June 2006, net, 2 males, 1 female, leg. P. DOMINIAK.

**Distribution.** Great Britain, France, Norway, Denmark, Germany, Estland, Russia, Ukraine, East Palaearctic (SZADZIEWSKI & BORKENT 2004). From Poland reported for the first time.

*Culicoides sphagnumensis WILLIAMS, 1955*

**SE Poland.** Kotlina Orawska-Nowotarska, Czarny Dunajec-Baligówka, 13 August 2006, ad lucem, 1 female, leg. A. KLASA.

**Distribution.** France, Norway, Denmark, Germany, Czech Republic, Estland, Lithuania, Russia, Belarus, Mongolia, East Palaearctic, Nearctic (SZADZIEWSKI & BORKENT 2004). From Poland reported for the first time.

*Dasyhelea kyrenica REMM, 1972*

**SW Poland.** Czeszów n. Wrocław, gravel pit, 30 August 2007, net, 1 male, leg. P. DOMINIĄK. **SE Poland.** Kotlina Orawska-Nowotarska, Wyżni Młyn at Potok Jeleśnia, 29 July 2006, net, 1 male, leg. P. DOMINIĄK.

**Distribution.** Russian Siberia (Buryatia) (REMM 1972). It is recorded from Poland and Europe for the first time.

*Dasyhelea lugensis BRODSKAYA, 1995*

**SW Poland.** Czeszów n. Wrocław, gravel pit, 30 August 2007, net, 2 males, leg. P. Dominiak. **SE Poland.** Zwierzyniec n. Zamość, at river Wieprz, 5 July 2006, net, 1 male, leg. P. DOMINIĄK.

**Distribution.** Russia, European part (BRODSKAYA 1995). New to the Polish fauna.

*Dasyhelea turanicola REMM et NAZARMUKHAMEDOV, 1969*

**SW Poland.** Czeszów n. Wrocław, gravel pit, 30 August 2007, net, 2 males, leg. P. DOMINIĄK.

**Distribution.** Germany, Kazakhstan, Uzbekistan, Turkmenistan, Kyrgyzstan, Tajikistan (REMM & NAZARMUKHAMEDOV 1969, SZADZIEWSKI 1985). From Poland recorded for the first time.

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